SRMUN Charlotte 2017

Assessing the Challenges and Opportunities of Globalism in the 21st Century

March 30 - April 1, 2017

CSTD_charlotte@srmun.org

Greetings Delegates,

Welcome to SRMUN Charlotte 2017 and the United Nations Commission on Science and Technology for Development (CSTD). My name is Prix Berry, and I will be serving as your Director for the CSTD. This will be my second conference as a SRMUN staff member. Previously, I served as the Assistant Director for the North Atlantic Treaty Organization at SRMUN Charlotte 2016. I hold a Master's and a Bachelor's degree in Political Science, and I am currently working as a Business Operations Analyst in the telecommunications field. Our committee's Assistant Director will be Jadina Hale. This will be her first conference as a SRMUN staff member. She is currently pursuing a bachelor's degree in International and Global Studies with a concentration in Affairs and Development.

CSTD works closely with the Economic and Social Council (ECOSOC) and the United Nations Conference on Trade and Development (UNCTAD) to provide high-level advice and recommendations on issues related to science and technology. The Commission was created in 1992 as a subsidiary body of ECOSOC. Currently CSTD's membership is composed of 43 Member States across five regions. CSTD continues to emphasis the importance of science and technology and the positive impact it has globally.

By focusing on the mission of the CSTD and the SRMUN Charlotte 2017 theme of "*Assessing the Challenges and Opportunities of Globalism in the 21st Century*," we have developed the following topics for the delegates to discuss come conference:

I. Smart Cities for Urban Sustainability
II. Improving Cyber Security through Global Partnerships

The background guide provides a strong introduction to the committee and the topics should be utilized as a foundation for the delegate's independent research. While we have attempted to provide a holistic analysis of the issues, the background guide should not be used as the single mode of analysis for the topics. Delegates are expected to go beyond the background guide and engage in intellectual inquiry on their own. The position papers for the committee should reflect the complexity of these issues and their externalities. Delegations are expected to submit a position paper and be prepared for a vigorous discussion at the conference. Position papers should be no longer than two pages in length (single spaced) and demonstrate your Member State's position, policies and recommendations on each of the two topics. For more detailed information about formatting and how to write position papers, delegates can visit srmun.org. **All position papers MUST be submitted no later than Friday, March 10, 2017, by 11:59 p.m. EST via the SRMUN website.**

Jadina and I are enthusiastic about serving as your dais for CSTD. We wish you the best of luck in your conference preparation and look forward to working with you soon. Please feel free to contact the Deputy Director-General Brittany Cabrera-Trujillo, Jadina, or myself if you have any questions as you prepare for the conference.

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The History for the United Nations Commission on Science and Technology for Development

The United Nations Economic and Social Council (ECOSOC) established the Commission on Science and Technology for Development (CSTD) in 1992, due to the "restructuring and revitalization of the United Nations."[1] This restructuring resulted in the CSTD replacing the Intergovernmental Committee on Science and Technology, the Advisory Committee on Science and Technology for Development, and the Interagency Task Force.[2] The purpose of this new Commission was to serve as the preeminent advisory group to both the General Assembly (GA) and ECOSOC on all things related to science and technology.[3] CSTD held its first meeting in New York City in April 1993.[4] In July 1993, the United Nations Conference on Trade and Development (UNCTAD) became responsible for servicing the Commission.[5] The Commission works closely with UNCTAD, which serves as its secretariat and handles the substantive work, providing CSTD with more results to present to the United Nations (UN).[6]

CSTD is comprised of 43 Member States, each serving four-year terms.[7] Member States are elected by ECOSOC, where the allocation of seats are represented from five regional areas, which includes 11 seats for the African states, nine seats for the Asia-Pacific states, eight seats for the Latin-American and Caribbean states, five seats for the Eastern European States, and ten seats for the Western European and other states.[8] The Commission meets annually for one week in Geneva, Switzerland.[9] At each session, a new Chairperson and four Vice-Chairpersons are elected as the new bureau for the next session.[10] The budget for CSTD is decided by ECOSOC annually. Currently, CSTD has a budget that is approximately USD $330,000.[11]

CSTD is tasked with many responsibilities including analyzing questions related to science and technology (S&T), which also includes the overall development and advancing the understanding of S&T policies in developing Member States.[12] CSTD is also responsible for advising and developing guidelines related to S&T issues for the UN system.[13] These issues can include topics ranging from gender equality in science to intelligence, and also surveillance and privacy issues to genetic modification.[14] CSTD acts to encourage collaboration "between United Nation funds, programmes and specialized agencies" to accomplish internationally agreed upon development goals.[15]

One of the most important events for CSTD was the World Summit on the Information Society (WSIS). The purpose of this summit was to establish the foundations for an inclusive information society.[16] Attendees discussed the roles of governments, the private sector, and society in implementing information and communication

[1] "Mandate and Institutional Background," United Nations Conference on Trade and Development, http://unctad.org/en/Pages/CSTD/CSTD-Mandate.aspx (accessed June 6, 2016).

[2] "UN Commission on Science and Technology for Development," STEPS Centre, http://steps-centre.org/anewmanifesto/timeline/un-commission-on-science-and-technology-for-development/ (accessed June 6, 2016).

[3] "Mandate and Institutional Background," United Nations Conference on Trade and Development, http://unctad.org/en/Pages/CSTD/CSTD-Mandate.aspx (accessed June 6, 2016).

[4] "UN Commission on Science and Technology for Development," STEPS Centre, http://steps-centre.org/anewmanifesto/timeline/un-commission-on-science-and-technology-for-development/ (accessed June 6, 2016).

[5] Ibid.

[6] Ibid.

[7] "Membership of the Commission on Science and Technology for Development," United Nations Conference on Trade and Development, http://unctad.org/en/Pages/CSTD/CSTD-Membership.aspx (accessed June 7, 2016).

[8] Ibid.

[9] Ibid.

[10] Ibid.

[11] "Proposed Programme Budget for the Biennium 2012-2013," United Nations Conference on Trade and Development, http://unctad.org/meetings/en/Miscellaneous%20Documents/N1131920_en.pdf (accessed July 3, 2016).

[12] Ibid.

[13] Ibid.

[14] Ibid.

[15] Ibid.

[16] "Geneva Plan of Action," World Summit on the Information Society, http://www.itu.int/net/wsis/docs/geneva/official/poa.html (accessed July 4, 2016).

technology (ICT) goals.[17] The resulting World Summit Outcome report focused heavily on science and technological development, especially within developing Member States. It also discusses the subtopics of education, agricultural development, and gender equality, all within the fields of science and technology.[18]

Through A/RES/66/211, CSTD established a forum as a follow-up on the outcomes of the World Summit on the Information Society.[19] It is also recognizes that technology is not wide spread, and therefore, not everyone can benefit from it.[20] To fix this, the resolution suggests enhancing partnerships between public and private sectors.[21] The result from this Summit is further discussed in A/RES/70/125.[22] This resolution recognizes the progress made in science and technology, both in developed and developing Member States specifically, the cooperation between several agencies and its ability to acquire more results.[23] Though the resolution acknowledges results, it also mentions where more work is needed. The resolution acknowledges, "Particular attention should be paid to addressing the specific information and communications technology challenges facing children, youth, persons with disabilities, older persons, indigenous peoples, refuges, and internally displaced persons, migrants and remote and rural communities."[24]

E/RES/2009/8 recognizes UNCTAD's help in bringing attention to African states and the economic growth it has spurred.[25] E/RES/2009/8 also emphasized on the lack of global focus regarding developing Member States.[26] The resolution suggests that education should be used as a foundation topic for further improvements.[27] The resolution also stresses that science and technology for development will play a crucial role in solving problems such as climate change and the food crisis.[28] E/RES/2011/17 focuses more on agricultural science, technology, and innovation systems, as well as the belief that women in agriculture should get credit for their work.[29] From this resolution, the collaboration between the CSTD and the Commission on the Status of Women increased by allowing access and participation for females training in science and technology.[30] The UNCSTD Gender Advisory Board was established to monitor implementations and to advise the Commission on new programs, regarding gender issues.[31]

E/RES/2015/27 is the latest resolution by ECOSOC regarding the CSTD, and recognizes the Commission's role within the global world.[32] It focuses on ICTs, which is vital for technological development.[33] E/RES/2015/27 suggests that the focus should be on policies for digital development and ecosystems.[34] It also mentions the role of technology and science as it has been an important subject for the Millennium Development Goals (MDGs) and

[17] Ibid.

[18] 60/1. 2005. *World Summit Outcome*. United Nations General Assembly. https://documents-dds-ny.un.org/doc/UNDOC/GEN/N05/487/60/PDF/N0548760.pdf?OpenElement (accessed June 10, 2016).

[19] "Resolution adopted by the General Assembly 66/211. Science and technology for development," United Nations Conference on Trade and Development, http://unctad.org/en/PublicationsLibrary/ares66d211_en.pdf (accessed June 10, 2016).

[20] Ibid.

[21] Ibid.

[22] "Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society," United Nations Conference on Trade and Development, http://unctad.org/en/PublicationsLibrary/ares70d125_en.pdf (accessed June 10, 2016).

[23] Ibid.

[24] Ibid.

[25] Ibid.

[26] "Resolution 2009/8 Science and technology for development," United Nations Conference on Trade and Development, http://unctad.org/Sections/un_cstd/docs/ecosoc_res%2020098_en.pdf (accessed June 10, 2016).

[27] Ibid.

[28] "Resolution 2009/8 Science and technology for development," United Nations Conference on Trade and Development, http://unctad.org/Sections/un_cstd/docs/ecosoc_res%2020098_en.pdf (accessed June 10, 2016).

[29] Ibid.

[30] Ibid.

[31] "UN CSTD Gender Advisory Board," Gender IT, http://www.genderit.org/content/un-cstd-gender-advisory-board (accessed June 10, 2016).

[32] 2015/27. *Science, technology and innovation for development*. United Nations Conference on Trade and Development. http://unctad.org/en/Pages/CSTD/CSTD-Mandate.aspx (accessed June 10, 2016).

[33] Ibid.

[34] Ibid.

should be highlighted within the Sustainable Development Goals (SDGs).[35] Through these resolutions, the cooperation between several agencies has developed over time, as a result, the focus on science and technology for developing Member States has significantly increased. [36]

The following CSTD Member States will be represented at SRMUN Charlotte 2017:

ANGOLA, AUSTRIA, BOLIVIA, BRAZIL, BULGARIA, CAMEROON, CANADA, CENTRAL AFRICAN REPUBLIC, CHILE, CHINA, COSTA RICA, COTE D'IVOIRE CUBA, DOMINICAN REPUBLIC, FINLAND, GERMANY, HUNGARY, INDIA, IRAN, JAPAN, KENTA, LATVIA, LIBERIA, MAURITANIA, MURITIUS, MEXICO, NIGERIA, OMAN, PAKISTAN, PERU, POLAND, PORTUGAL, RUSSIAN FEDERATION, SRI LANKA, SWEDEN, SWITZERLAND, THAILAND, TURKEY, TURMENISTAN, UGANDA, UNITED KINGDOM OF GREAT BRITAIN AND NOTHERN IRELAND, UNITED STATES OF AMERICA, and ZAMBIA.

[35] Ibid.
[36] Ibid.

I: Smart Cities for Urban Sustainability

Introduction

Just over half the world's population resides in cities, where that percentage is projected to increase to 66 percent by the year 2050.[37] Asia and Africa are expected to account for 90 percent of that growth with developing Member States facing a higher rate of urbanization than developed Member States.[38] There is a growing demand for smart cities, as smart cities have the potential of reducing the urbanization impacts while offering citizens a high quality of life.[39] A "smart city" is a city that "brings together technology, government, and society."[40] In order to bring awareness towards urban sustainability, there are certain characteristics that must be included within a smart city. These characteristics can include smart buildings, smart transportation, smart communication, smart energy, and smart networks.[41] Technology plays a critical role in the development of smart cities, technology can improve the quality of life as well as offer a way for city officials to interact with the community.[42] The overall purpose of a smart city is "to make the lives of the residents easier and safer."[43]

In order to become a smart city, it is up to local governments to develop a roadmap. [44] Local governments must first establish why there is a need for a smart city; demographics play a vital role in this decision.[45] Governments must also develop a policy that "defines the roles, responsibilities, strategies, and objectives of the smart cities."[46] In addition, governments should be aware of the role of citizens. Engaging citizens in the development of smart cities has the potential to increase efficiency within the city, as well as building trust in the government through e-government services. [47] For example, the city of Palo Alto, California, developed a mobile application that allows the public to report problems, such as a broken streetlight or water damage.[48] In addition, by using modern digital technologies, smart cities can monitor a city's resources and provide intelligent data that could then allow officials to better regulate those resources.[49]

History

The CSTD has recently started to examine trends related to urban sustainability. At CSTD's 2012-2013 session, a strong focus was placed on the role of science, technology, and innovation within an urban environment.[50] Emphasis was placed on urban planning, transportation, and resource management (water, food, energy, and waste), as well as a need for inter-city communication and learning.[51] During the 2013-2014 session, CSTD chose information and communication technology ICTs as its main priority, while the 2014-2015 session CSTD examined

[37] "World's population increasingly urban with more than half living in urban areas," ECOSOC, https://www.un.org/development/desa/en/news/population/world-urbanization-prospects.html (accessed June 7, 2016).

[38] "Issues Paper On Smart Cities and Infrastructure," United Nations Commission on Science and Technology for Development, http://unctad.org/meetings/en/SessionalDocuments/CSTD_2015_Issuespaper_Theme1_SmartCitiesandInfra_en.pdf (accessed July 15, 2016).

[39] "About," IEEE Smart Cities, http://smartcities.ieee.org/about.html (accessed July 15, 2016).

[40] Ibid.

[41] Ibid.

[42] Sam Musa, "Smart City Roadmap." Academia, January 2016, http://www.academia.edu/21181336/Smart_City_Roadmap (accessed January 7, 2017).

[43] Ibid.

[44] Ibid.

[45] Ibid.

[46] Ibid.

[47] Ibid.

[48] Ibid.

[49] "How Smart Cities Enable Urban Sustainability," Triple Pundit, http://www.triplepundit.com/2015/08/smart-cities-enable-urban-sustainability/# (accessed July 15, 2016).

[50] "Issues Paper On Smart Cities and Infrastructure" United Nations Commission on Science and Technology for Development http://unctad.org/meetings/en/SessionalDocuments/CSTD_2015_Issuespaper_Theme1_SmartCitiesandInfra_en.pdf pg6 (accessed July 15, 2016).

[51] Ibid.

"digital development."[52] Naturally, topics such as cloud computing, the Internet of Things (IoT), and data gathering and analysis were discussed leading to a realization that ICTs were moving from the margins of urban development to the center stage.[53] The United Nations (UN) Economic Commission for Europe (ECE) held its 2015-2016 Inter-Sessional Panel on Smart Cities Infrastructure.[54] Some recommendations from these sessions called for collaboration in seeking opportunities to improve ICT practices, promoting ICTs as well as science, technology, and innovations (STIs) in urban planning, and supporting "developing countries policies and activities on science and technology…by encouraging financial assistance, technical assistance, and capacity building."[55]

As CSTD has been conveying awareness to smart cities, the UNECE created the United Smart Cities (USC) program in 2014.[56] The purpose of the program is to examine the key concepts of a smart city through different geographical contexts, scale up the concept of smart cities, while promoting the exchange of knowledge transfer on sustainable urban development through for smart cities.[57] The program addresses the challenges that governments face in urbanization in order to bring "efficient urban planning and technological solutions to urban issues."[58] When establishing smart cities, each city has different objectives; USC stresses the importance of the role of local governments in establishing a city organization committee to help identify the highest priority areas for the smart city transformation.[59] USC plans to use the Sustainable Development Goals (SDGs) as a way for local governments to identify the highest priority areas.[60]

On 25 September 2015, Member States adopted the SDGs with the objective to "end poverty, protect the planet, and ensure prosperity for all."[61] SDG's Goal 11 specifically calls for a need to address the inclusiveness, safety, resilience, and sustainability of an urban environment.[62] The implementation of smart cities addresses this goal directly while indirectly taking into account Goal 1 (ending poverty), Goal 3 (improving health), Goal 4 (education), Goal 5 (water and sanitation), Goal 7 (sustainable energy), Goal 8 (economic growth and employment), and Goal 13 (climate change).[63]

Current Situation

In 2016, the International Telecommunication Union (ITU) and the ECE launched a global initiative at the ITU-ECE Forum on "shaping smarter and more sustainable cities" as a way to promote the use of ICTs as a stimulus in the transition to smart sustainable cities.[64] The initiative, the United for Smart Sustainable Cities (U4SSC) implements SDG Goal 11 as a way to achieve smart cities.[65] U4SSC is open to all UN agencies, as well as municipalities, academia, and other relevant stakeholders; there will be a strong focus "on the integration of ICTs in urban operations."[66]

[52] Ibid.
[53] Ibid.
[54] "United Smart Cities: Towards smarter and more sustainable cities," United Nations Committee on Trade and Development, http://unctad.org/meetings/en/Presentation/CSTD_2015_ppt14_Carriero_UNECE_en.pdf (accessed August 20, 2016).
[55] "Draft resolution on Science, technology and innovation for Development," United Nations Committee on Trade and Development, http://unctad.org/meetings/en/SessionalDocuments/CSTD_2014_DraftRes_STI.pdf (accessed August 21, 2016).
[56] United Smart Cities (USC)," Partnerships for SDGs, https://sustainabledevelopment.un.org/partnership/?p=10009, (accessed January 7, 2017).
[57] Ibid.
[58] Ibid.
[59] Ibid.
[60] Ibid.
[61] "Sustainable Development Goals," The United Nations, http://www.un.org/sustainabledevelopment/sustainable-development-goals/#prettyPhoto[gallery4884]/0/ (accessed July 15, 2016).
[62] Ibid.
[63] Ibid.
[64] "UN launches campaign to urge 'smart' transition to sustainable cities." United Nations, http://www.un.org/apps/news/story.asp?NewsID=54052#.WHP427CQzcs, (accessed January 7, 2017).
[65] Ibid.
[66] Ibid.

A challenge when transitioning to smart cities is the lack of a solid definition of "smart city." Different individuals and organizations understand the approach and definition of a smart city differently, this presents a challenge when transition into a smart city. At the conclusion of the ITU-ECE forum, the Rome Declaration was introduced.[67] The Rome Declaration is a 10-point manifesto that helps provide cities with some foundation as they transition into smart sustainable cities.[68] The declaration encourages "the use of internationally agreed key performance indicators and technical standards in service of sustainable development objectives in the urban context."[69] The declaration also stresses the idea of citizen engagement through the use of e-governance as well as peer-to-peer learning amongst city leader.[70]

Habitat III is a major global summit that was formally known as the UN Conference on Housing and Sustainable Urban Development.[71] Habitat III meets every 20 years, the most recent conference concluded in October of 2016.[72] Prior to the start of the summit, 22-issue papers were created to bring awareness towards urbanization. For smart cities, the issue papers brought awareness to the importance of the inclusion of ICT networks when discussing urbanization. ICTs have the ability to shape and change the way people live; it also has the ability to encourage economic growth and interconnectedness amongst citizens living in smart cities.[73] ICTs are seen as the core function of smart cities. In the 21st century urbanization, ICTs have enabled digital platforms to support the creation of information and knowledge networks.[74] These networks make gathering information and data possible for data analysis as well as enhancing the understanding of how smart cities function.[75] The smart city issue paper notes that in order for a smart city to be sustainable it must have attributes of urban aspects, which includes technology, infrastructure, sustainability, governance, and economics.[76] The issue paper lists several recommendations for key areas to focus on when transitions to smart cities. The paper recommends high quality streets and public spaces, as well-planned streets can shape the urban structure while supporting the local economy, connectivity and creativity of future developments.[77] In addition to well-planned streets, connectivity should also be a key focus area. Connectivity can create access to jobs and services; it can also help boost the local economies.[78] Overall, it is up to legislators as well as Member States to create legislation, rules, and regulation for the planning of smart cities. To reap the benefits of smart cities, strategic planning is necessary. Funding for smart cities comes from a variety of sources. Smart cities are an investment, which means there are stakeholders when it comes to funding. Stakeholders can include the public and private sector, civil society, as well as the local government.[79]

Smart City Projects

Currently, there are many smart city projects occurring around the world. Some examples range from small pilot projects such as Amsterdam's Smart Street Lights to entire city projects in locations like Nice, France; Busan, Republic of Korea; and New York City.[80] In general, each project addresses one or more of the six main components of a smart city.[81] Those components are Smart Mobility, Smart Governance, Smart Economy, Smart Environment, Smart People, and Smart Living.[82]

[67] Ibid.
[68] Ibid.
[69] Ibid.
[70] Ibid.
[71] "About Habitat III," Habitat 3, https://www.habitat3.org/the-new-urban-agenda/about (accessed July 15, 2016).
[72] Ibid.
[73] "Habitat III Issue Papers 21 – Smart Cities." UNHabitat, http://unhabitat.org/wp-content/uploads/2015/04/Habitat-III-Issue-Paper-21_Smart-Cities-2.0.pdf, (accessed January 7, 2017).
[74] Ibid.
[75] Ibid.
[76] Ibid.
[77] Ibid.
[78] Ibid.
[79] Ibid.
[80] Boyd Cohen, "Top 10 Smart Cities on the Planet," Fast Company, https://www.fastcoexist.com/1679127/the-top-10-smart-cities-on-the-planet (accessed August 20, 2016).
[81] Ibid.
[82] Ibid.

Busan, Republic of Korea

One of Busan's primary focuses is the gainful employment of its graduates year after year while retaining a high quality workforce, thus addressing the Smart People component.[83] The Busan Metropolitan Government realized that by connecting citizens, government, educational institutions, and multiple industries through the use of ICTs they could create a sustainable urban environment that provided quick and simple access to city services.[84] The Busan Information Highway was already in existence at the start of the project and connected 319 institutions.[85] In a single year, 840 people registered for professional development courses and seven new businesses registered as start-ups.[86] In order to implement these changes, Busan worked closely with Cisco to develop plans for an "S+CC model called u-City."[87] The strategic planning allowed for a smooth transition from physical communities to a more smart and connected communities.[88] The transformation allowed Busan to be considered as a "logistical hub of East Asia, an economic hotspot of southeast Korea, and a knowledge based green-growth city."[89]

New York City, United States

The City of New York recently collaborated with Cisco Systems Inc., the largest multinational networking company worldwide, to launch City 24/7 information platforms.[90] These interactive platforms collect information such as store hours and breaking international news from local businesses, citizens, and open government programs.[91] That information is then analyzed to provide relevant and timely information to the public.[92] Organizations participating in this initiative include the New York Department of Parks and Recreation, the New York Department of Information and Telecommunications, NYC Department of Transportation, and more.[93] In addition to accessing the information on a smartphone, tablet, or other electronic device, the city has also installed Smart Screens.[94] These screens are located though out the city in converted pay phone booths. They are touch screen with multilingual audio and voice technology and provide citizens with information such as news and traffic updates, restaurants, and attractions nearby, safety alerts and area services in real-time.[95] Citizens can also use these Smart Screen booths to access 311 and report complaints.[96] Eventually, the city hopes to make the booths with Wi-Fi hotspots and allow users to make Skype calls. There are no costs accrued to the city for this initiative, but will be maintained by revenue generated from advertisements.[97] In addition, New York City will also gain a 36 percent cut of profits from the ads.[98]

Nice, France

Nice began an Internet of Everything (IoE) Smart City Pilot program.[99] The primary focus of the project is to test and validate an "IP-enabled technology architecture and economic model" with a secondary goal of analyzing any

[83] "Smart Cities," Cisco, http://www.cisco.com/c/en/us/solutions/industries/smart-connected-communities.html (accessed July 15, 2016).
[84] Ibid.
[85] Ibid.
[86] Ibid.
[87] "Smart+Connected City Services Cloud-Based Services Infrastructure Enables Transformation of Busan Metropolitan City", Cisco, http://www.cisco.com/c/dam/en_us/about/ac79/docs/ps/Busan-Green-u-City_IBSG.pdf (accesses January 7, 2017).
[88] Ibid.
[89] Ibid.
[90] "About," IEEE Smart Cities, http://smartcities.ieee.org/about.html (accessed July 15, 2016).
[91] Ibid.
[92] Ibid.
[93] Tony Kim, Shane Mitchell, Nicola Villa, "Smart Cities," Cisco, http://www.cisco.com/c/en/us/solutions/industries/smart-connected-communities.html (accessed July 15, 2016).
[94] Ibid.
[95] Ibid.
[96] Marguerite Reardon, "Smart Screens to replace payphones in NYC," CNET, http://www.cnet.com/news/smart-screens-to-replace-pay-phones-in-nyc/ (accessed July 15, 2016).
[97] Ibid.
[98] Ibid.
[99] Ibid.

IoE social benefits.[100] The project focuses on four aspects of smart city infrastructure: smart circulation, smart lighting, smart waste management, and smart environment monitoring.[101] Smart circulation (mobility) focuses on the transportation system. Overall improvements to traffic flow, driving conditions, and general movement around the city can be improved by analysis of transit related data and installation of technology to provide continuous feedback to city planners.[102] Smart Lighting focuses on creating a more efficient power grid that is also environment friendly.[103] Smart waste management incorporates ways to reduce waste such as expanded recycling programs in addition to monitoring the current waste being created in public city receptacles.[104] This is accomplished by placing sensors on trashcans and recycling bins that alert city official when those receptacles are near capacity, thus reducing the amount of unnecessary labor, driving, and carbon dioxide emissions caused by running trucks on routes that do not need them as often.[105] Smart environment monitoring captures data and analyzes the information to accurately predict both natural and industrial disasters.[106] This would allow for faster and more effective responses to potentially dangerous situations.[107]

Conclusion

Polarizing growth, increased poverty, decreasing budgets, and numerous environmental hazards are just a few challenges the international community is facing. Information and communication technologies have come a long way in recent years and their use to develop smart cities in traditionally urban areas could be the solution to many of the problems existing in today's world. However, the technology and resources needed to develop smarter cities is not universally available. Many developing Member States could benefit greatly from the projects currently underway in many developed Member States. Additionally, there is the question of who should be in command of these projects, government entities or private businesses. There is a growing trend towards smart cities, as there is the idea that the implementation of smart cities can address the issue of urbanization. Strategic planning is the first step towards becoming a smart city, in order to reap the benefits of smart cities, strategic planning and innovative thinking is required. More importantly, there should be an understanding that the development of smart cities is not the final aim of local officials; citizen engagement should be included as well. The moving trend towards smart cities is a viable option for the urban sustainability of the future.

Committee Directive

Delegates should also be aware of any smart city projects within both their Member State as well as the surrounding region. In addition, how the urban living conditions within their Member State and what are have been the recent pros and cons in revitalizing such areas. Delegates should focus on using technology to improve all aspects of life, including resource management, healthcare, education, and transportation in addition to basic infrastructure such as building, water, and energy. They should be prepared to address key challenges and concerns of a "smart city" especially within developing Member States. What organization(s) should oversee the city and/or core features? Is it possible to produce customized local solutions while accessing global technologies? What steps should be taken when implementing smart initiatives, do some initiatives take precedent over others? How can governments facilitate the collection of data without infringing on the privacy of citizens?

[100] Ibid.
[101] Ibid.
[102] Jesse Berest, "Smart city control centers: Nice, France the latest to get a city 'dashboard,'" Smart Cities Council, http://smartcitiescouncil.com/article/smart-city-control-centers-nice-france-latest-get-city-dashboard (accessed August 28, 2016).
[103] Ibid.
[104] Ibid.
[105] Ibid.
[106] Ibid.
[107] Ibid.

II: Improving Cyber Security through Global Partnerships

Introduction

Science and technology play an important role in our world today where it can promote globalization.[108] One of the largest contributors to globalization is the Internet.[109] The Internet has been viewed a positive influence towards economic growth and globalization.[110] However, "cyberattacks have the potential to destabilize on a global scale. Cybersecurity must therefore be a matter of global concern."[111] The most vulnerable institutions that are prone to serious cyber-attacks are nuclear facilities.[112] Cyberattacks on nuclear plants have occurred in the past, such as the 2014 attack on the Monju nuclear power plant in Japan, where a malicious malware attack infected the reactor control room.[113] In addition, the 2016 attack on the Gundremmingen nuclear power plant in Germany posed a serious threat to data security.[114] Not only are nuclear facilities under a serious cyber threat, there is also a threat to the information and communication technology (ICT) infrastructure.[115] Global partnership amongst Member States as well as the private sector is one of many essential tools for improving cyber security.[116]

Several organizations such as the United Nations (UN) and its subsidiary bodies have introduced and implemented several measures to increase awareness towards cyber security. However, there is still much work that needs to be done. Member States should be aware of all states' capabilities and financial contributions with the idea that all states are on different levels of development.[117] It should be known that no state, entity, or corporation is spared by the threats of cyberattack or cyber warfare.

History

International Efforts

The discussion of cybersecurity has increased significantly as more and more threats and cyberattacks take place. It has been a topic of consideration for CSTD in the past.[118] CSTD emphasized the critical and important role of the implementation of the World Summit on Information Society (WSIS) regarding cybersecurity.[119] Since the introduction of WSIS, there have been several positive outcomes, such as the investment in infrastructure, capacity

[108] "The Role of Science and Technology in Society and Governance," UNESCO, http://www.unesco.org/science/wcs/meetings/eur_alberta_98_e.htm (accessed July 10, 2016).

[109] James Manyika and Charles Roxburgh, "The great transformer: The impact of the Internet on economic growth and prosperity." McKinsey Insights. http://www.mckinsey.com/industries/high-tech/our-insights/the-great-transformer (accessed July 17, 2016).

[110] Ibid.

[111] "Cybersecurity Must Be Matter of Global Concern, Says Secretary-General in Video Message to Model UN," United Nations, http://www.un.org/press/en/2013/sgsm15408.doc.htm (accessed July 10, 2016).

[112] "Global nuclear facilities 'at risk' of cyber-attack," BBC, http://www.bbc.com/news/technology-34423419 (accessed July 11, 2016).

[113] Pierluigi Paganin, "A German nuclear plan suffered a distruptive cyber attack", Security Affairs, http://securityaffairs.co/wordpress/52116/security/nuclear-plant-attack.html (accessed January 7, 2017).

[114] Ibid.

[115] "Special Event On Cybersecurity," ECOSOC, http://www.un.org/en/ecosoc/cybersecurity/summary.pdf (accessed July 14, 2016).

[116] Harry Raduege Jr, "The Public/Private Cooperation We Need on Cyber Security." *Harvard Business Review*. June 2013. https://hbr.org/2013/06/the-publicprivate-cooperation (accessed July 12, 2016).

[117] "Potential Security Impacts of Cyberspace Misuse Considered in First Committee, as Speakers Warn of Arms Race, Emergence of New Theatre of Warfare," United Nations, http://www.un.org/press/en/2015/gadis3537.doc.htm (accessed July 21, 2016).

[118] "Special Event On Cybersecurity," ECOSOC, http://www.un.org/en/ecosoc/cybersecurity/summary.pdf (accessed July 14, 2016).

[119] "Contribution to the CSTD ten-year review of the implementation of WSIS Outcomes," United Nations Committee on Trade and Development, http://unctad.org/Sections/un_cstd/docs/cstd_wsis10_eeas_en.pdf (accessed October 28, 2016).

building, and the development of new technologies.[120] The digital divide between developing and developed Member States has decreased since the adoption of WSIS. Within the 10-year review, it was noted that "cyber-security is addressed by national CERT'S and know-how exchanges" between Member States.[121] WSIS can create awareness on cybersecurity at a global scale. The comprehensive 10-year review also includes the idea of internet governance. CSTD has addressed the issue of internet governance, by noting that the internet is rapidly involved into a global facility that is becoming widely available to all.[122] As the internet is evolving, there is a lack of strong internet governance. CSTD has stressed the inclusion of governments, the private sector, the civil society, and international organizations when creating public policies for internet governance.[123]

In addition, several UN committees and organizations have introduced or brought awareness towards the continued threats of cyberattacks if actions are not taken to address cybersecurity issues. The UN Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security (GGE) was created by A/RES/67/53.[124] The GGE's main goals are to "examine the existing and potential threats from the cyber-sphere and possible cooperative measures to address them."[125] A/68/98 was a report created by the GGE, where it emphasized the need for the international community to assist in improving security for ICT infrastructure.[126] A/68/98 notes that ICTs have the potential to bring vast social and economic benefits, which can be seen as a boost for developing Member States.[127] The resolution also noted, "ICTs can also be used for purposes that are inconsistent with international peace and security, producing a noticeable increase in risk in recent years as they are used for crime and other disruptive activities."[128] GGE later reiterated that global partnership has the ability to enhance stability and security. [129] However, Member States must undergo capacity-building measures as well as confidence and trust in the capabilities of other states, the private sector, and the civil society in order to reap the benefits of cybersecurity.[130]

In the 2010 session, the UN Economic and Social Council (ECOSOC) held a briefing on cybersecurity, where the council acknowledged, "cyberspace was not an integrated part of all human activity and the most powerful tool of communication existing today."[131] Council Vice President Somduth Soborun stressed, "[W]e are more vulnerable than we realize, which is why cybersecurity needs to be placed high on our agenda."[132] During the briefing, the Council stressed the high importance of global partnership amongst not only Member States, but also incorporating the private sector when improving cybersecurity. It was noted that almost 700 private sector partners could become involved, if needed to effectively combat cybercrime.[133] Although no resolutions were introduced during this briefing, it nonetheless, established a framework on improving cybersecurity.

[120] Ibid.
[121] Ibid.
[122] Ibid.
[123] Ibid.
[124] "Group of Governmental Experts (GGE) to make recommendations on possible aspects that could contribute to but not negotiate a treaty banning the production of fissile material for nuclear weapons or other nuclear devices," United Nations, https://www.un.org/disarmament/geneva/gge-fissile/ (accessed July 9, 2016).
[125] "UN Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security," Geneva Internet Platform, http://giplatform.org/actors/un-group-governmental-experts-developments-field-information-and-telecommunications-context (accessed July 12, 2016).
[126] "Group of Governmental Experts on Developments in the Field of Information and Telecommunications in the Context of International Security," United Nations, https://disarmament-library.un.org/UNODA/Library.nsf/a45bed59c24a1b6085257b100050103a/2de562188af985d985257bc00051a476/$FILE/A%2068%2098.pdf (accessed July 24, 2016).
[127] Ibid.
[128] Ibid.
[129] Ibid.
[130] Ibid.
[131] "Economic and Social Council Opens General Segment of 2010 Session," The United Nations, http://www.un.org/press/en/2010/ecosoc6444.doc.htm (accessed July 12, 2016).
[132] Ibid.
[133] Ibid.

In 2011, ECOSOC and the UN Department of Economic and Social Affairs (DESA) held a special event focused on "an international framework to combat cybercrime and improve cybersecurity."[134] The purpose of this event was to "build on the briefing, which took place on 16 July 2010."[135] Member States were brought together along with the UN system, the public and private sector, and "as well as other civil society organizations that have a particular interest in the areas of cybersecurity and cybercrime."[136] There were several objectives of this event, which included building awareness at the international level, identifying a range of best practices and policies that are currently in place globally in order to build a culture of cybersecurity, and explore different options for a global response in combatting cybercrime.[137]

The International Telecommunication Union (ITU) is one of the oldest intergovernmental organizations, founded in 1865 in Paris as the International Telegraph Union.[138] ITU entered the UN system through A/RES/124 (II) in 1947; ITU is based in Geneva, Switzerland, where its membership includes 192 Member States and more than 700 Sector Members.[139] ITU is the UN forefront specialized agency on information and communication technologies.[140] ITU serves as a "global focal point for governments and the private sector."[141] The purpose of ITU can include "promoting the use of telecommunication services with the aim of facilitating peaceful relations, harmonize the actions of Member States and promote cooperation and partnership between Member States and the private sector."[142]

Throughout the years, the UN system has begun to rely more heavily on ITU as a way to combat cybersecurity while increasing the partnership between Member States and the private sector. In 2008, UTI and CSTD organized a session on "The Broadband and Cybersecurity."[143] The purpose of the session was to address the issues of broadband as well as cybersecurity within the framework of the 11th session of CSTD.[144] UTI and CSTD acknowledged the trend of ICTs towards broadband technologies.[145] It is important to understand that ICTs have the ability to enhance social and economic development, with that it is equally important to ensure ICTs are not disrupted by emerging cyber threats.[146] The current area of focus for ITU includes "building cybersecurity and confidence in online transactions, developing infrastructure for information and communication technologies to connect under-served and remote communities, and facilitating the implementation of the outcomes of the World Summit on Information Society."[147] In addition to working as a facilitator to the World Summit on Information Society (WSIS), ITU launched a project known as the Global Cybersecurity Index (GCI) that aims to "measure cybersecurity capabilities of Member States by ranking their level of cybersecurity development."[148] It is known that least developed Member States lack a stable cybersecurity system.[149] GCI seeks to improve cybersecurity in the least developed Member States by creating guidelines on drafting and implementing cybersecurity legislation.[150]

[134] "Special Event On Cybersecurity," ECOSOC, http://www.un.org/en/ecosoc/cybersecurity/summary.pdf. (accessed July 14, 2016).
[135] Ibid.
[136] Ibid.
[137] Ibid.
[138] "International Telecommunication Union," United Nations System Organization, http://www.unsceb.org/content/itu (accessed September 13, 2016).
[139] Ibid.
[140] "Agencies of the UN: ITU," The United Nations, http://www.un.cv/agency-itu.php (accessed September 7, 2016).
[141] Ibid.
[142] "International Telecommunication Union," United Nations System Organization, http://www.unsceb.org/content/itu (accessed September 13, 2016).
[143] "Follow-up to the World Summit on the Information Society: Special multi-stakeholders panel discussion," International Telecommunication Union, https://www.itu.int/osg/dsg/speeches/2008/may27-2.html (accessed October 30, 2016).
[144] Ibid.
[145] Ibid.
[146] Ibid.
[147] Ibid.
[148] Sheetal Kumar, "Cybersecurity: what's the ITU got to do with it?" Global Digital Partners, September 2015, http://www.gp-digital.org/cybersecurity-whats-the-itu-got-to-do-with-it/ (accessed September 13, 2016).
[149] Ibid.
[150] Ibid.

GCI encourages Member States to create capacity-building programs to assist least developed Member States in establishing their own national response teams.[151]

Role of Global Partners

Global partnerships are fundamental to improving cybersecurity. It should be noted "Cybersecurity is a global problem requiring global solutions."[152] Although cybersecurity is a global issue, several Member States lack resources and funding to improve their cybersecurity.[153] Therefore, it presents a challenge for those Member States; some of those challenges can include an increase in cybercrime.[154] One of the most comprehensive partnerships formed was between the International Multilateral Partnership Against Cyber Threats (IMPACT) and the ITU in 2011 during the WSIS.[155] This partnership "brings together governments, academia, and industry experts to enhance the global community's capabilities in dealing with cyber threats."[156] In addition to partnerships amongst Member States, the private sector has the ability to work alongside governments when addressing the cybersecurity issue. Incorporating the private sector can open a variety of opportunities for Member States in the areas of information sharing, knowledge, and ICT infrastructure.

Governments

Governments are often tasked with introducing and implementing laws that apply to cybersecurity. Several governments face problems when trying to implement cybersecurity methods into their systems. These governments lack the resources and guidance, which in turn leaves their network infrastructure more susceptible to cyberattacks and cyberterrorism.[157] As most developing Member States are in the earlier stages of ICT investment, these Member States seek to reap from the benefits that ICTs have available.[158] However, for developing Member States, even before obtaining stable ICT infrastructure these Member States are the most vulnerable to cyberattacks. The vulnerability increases for developing Member States because in the early stages of ICT development, improving cybersecurity is not a top priority.[159] In return, it not only leaves the government extremely vulnerable, but the vulnerability extends to the citizens as well.[160]

One of the biggest problems developing Member States face regarding cybersecurity is the lack of understanding on how to secure their networks.[161] Much of the existing mechanisms and policies that developing Member States use are deprived from developed Member States.[162] Unlike developed Member States, developing Member States lack well-trained experts on cybersecurity.[163] There is a strong need for a partnership between developed and developing Member States, as developing Member States look toward developed Member States for guidance. Failure to establish that partnership could "generate 'safe havens,' where cyber criminals can make use of the legal loopholes,

[151] Ibid.

[152] "Cybersecurity: A global issue demanding a global approach," ECOSOC, http://www.un.org/en/development/desa/news/ecosoc/cybersecurity-demands-global-approach.html (accessed July 9, 2016).

[153] Ibid.

[154] Ibid.

[155] "IMPACT becomes the cybersecurity executing arms of the United Nations specialised agency, ITU," IMPACT-alliance, http://www.itu.int/ITU-D/cyb/publications/2012/IMPACT/IMPACT-en.pdf (accessed September 7, 2016).

[156] "Cybersecurity: A global issue demanding a global approach," ECOSOC, http://www.un.org/en/development/desa/news/ecosoc/cybersecurity-demands-global-approach.html (accessed July 9, 2016).

[157] Ibid.

[158] Adam Tagert, "Cybersecurity Challenges in Developing Nations." Carnegie Mellon University, December 2010, http://repository.cmu.edu/cgi/viewcontent.cgi?article=1021&context=dissertations (accessed July 16, 2016).

[159] Ibid.

[160] Ibid.

[161] Ibid.

[162] Ibid.

[163] Ibid.

and the lack of strong security measures present sometimes in developing countries to perpetrate cybercrimes."[164] In most developing Member States, cybersecurity is in its infancy, yet it is strongly encouraged that all governments establish a Computer Emergency Response Team (CERT).[165] The national CERT proposal was made "in response to increasing level of computer use and computer dependency and the increasing attacks and threat on ICT network through computers."[166]

Incorporating the Private Sector through Public-Private Partnerships

As with governments, the private sector is equally vulnerable to a cyberattack. Along with the public sector, the private sector seeks ways to improve their cybersecurity while securing their own systems.[167] Public-private partnership (PPP) is the key to effectively implement measures that could strengthen cybersecurity, while decreasing cyberattacks from cyberterrorists and cybercriminals. It should be noted, "a great deal of expertise existed in the private sector."[168] The private sector owns majority of the ICT infrastructure, "ICT is a key component in improving the quality of life and participation in global economic activities."[169] For privately owned ICT infrastructure, it is up to the private sector to protect that infrastructure.[170] However, "It is critical that the public and private sectors work together to build a cybersecurity framework that takes into account the very legitimate business concerns of maintaining individual privacy obligations, securing corporate proprietary information, and safeguarding competitive positioning, while promoting an efficient exchange of information."[171]

The ITU-IMPACT alliance provides a solid foundation for PPP as the alliance is considered as the first "truly global multi-stakeholder and public-private alliance against cyber threats."[172] The alliance brings together 152 Member States while heavily relying on the expertise of the private sector and academia.[173] The key features for PPP lies within the services and solutions that IMPACT can offer to ITU Member States. The Global Response Centre (GRC) is "designed to be the foremost cyber-threat resource centre for the global community."[174] The partnership within the GRC is very diverse as the GRC is partnered with governments, experts, academia, and big businesses (Microsoft, Symantec Corporation, Kaspersky Lab, and more).[175] GRC plays an important role for ITU's Member States. The GRC can provide those Member States with access to special systems, such as the Network Early Warning System (NEWS). The purpose of NEWS is to assist Member States in decreasing cyberattacks by identifying cyber-threats early on.[176] NEWS has the potential of significantly decreasing a cyberattack as it gathers information from a wide variety of early warning alliances and cybersecurity venders in order relay the information to the proper entities.[177]

[164] "Cybersecurity: A global issue demanding a global approach," ECOSOC, http://www.un.org/en/development/desa/news/ecosoc/cybersecurity-demands-global-approach.html (accessed July 9, 2016).

[165] Ibid.

[166] Ibid.

[167] Ibid.

[168] "Economic and Social Council Opens General Segment of 2010 Session," United Nations, http://www.un.org/press/en/2010/ecosoc6444.doc.htm (accessed July 12, 2016).

[169] "An overview of cyber security challenges in the developing world," ICT 21, http://www.ict-21.ch/com-ict/IMG/pdf/Abstract-contextualisation-ref-7.pdf (accessed July 9, 2016).

[170] "Special Event On Cybersecurity," ECOSOC, http://www.un.org/en/ecosoc/cybersecurity/summary.pdf. (accessed July 14, 2016).

[171] Harry Raduege, Jr, "The Public/Private Cooperation We Need on Cyber Security." *Harvard Business Review*. June 2013. https://hbr.org/2013/06/the-publicprivate-cooperation (accessed July 12, 2016).

[172] "ITU-IMPACT," International Telecommunication Union, http://www.itu.int/en/ITU-D/Cybersecurity/Pages/ITU-IMPACT.aspx (accessed September 8, 2016).

[173] "IMPACT," IMPACT Alliance, http://www.impact-alliance.org/home/index.html (accessed September 8, 2016).

[174] "Services and Solutions Offered – GRC," IMPACT Alliance http://www.impact-alliance.org/countries/grc-intro.html (accessed September 8, 2016).

[175] Ibid.

[176] Ibid.

[177] Ibid.

Information Sharing

Information sharing is one of many positive steps towards improving cybersecurity.[178] Several Member States such as the United Kingdom of Great Britain and Northern Ireland (UK) and the United States of America (USA) have introduced national legislation regarding information sharing amongst its governments and the private sector. For example, the USA, at the national level, has implemented several programs through the various governmental agencies. In 2015, their Department of Homeland Security (DHS) introduced a cyber-information sharing program called the Cybersecurity Information Sharing Act (CISA).[179] The CISA provides a way for both the public and private sector to engage in cross channel information sharing.[180] In addition to information sharing, the CISA provides protection against cyber threats and defensive measures for those companies who follow set guidelines issued by the Department of Justice and DHS.[181]

Recently, the UK introduced the Cybersecurity Information Sharing Partnership (CiSP).[182] CiSP provides a way for the private sector and the government to work together in order to exchange information regarding cyber threats in real time.[183] The purpose of this partnership is to reduce the impact of a cyberattack on a UK business, while at the same time bringing increasing situational awareness.[184] Member States acknowledge that in order to promote cybersecurity, they need the help of the private sector. The private sector can provide an abundance of resources such as expertise and infrastructure, which in turn provides a beneficial partnership between both sectors. Although Member States acknowledge that incorporating the private sector is pivotal on improving cybersecurity, there is also a lack of information sharing between Member States that should be addressed.

Cyberspace lacks defined borders, which in return makes it difficult for Member States to engage in cross border information sharing. Member States are reluctant to engage in information sharing with each other, as they believe it can expose their vulnerabilities.[185] The GRC created Electronically Secure Collaborative Application Platform for Experts (ESCAPE) as a way to allow Member States to "pool their resources, share their expertise and remotely collaborate in a secure environment."[186] The ESCAPE plan provides Member States with the ability to use a single resource in order reach a wide network of partner Member States as well as the private sector.[187]

Conclusion

Cyber-attacks and cyber-threats have increased significantly over the past few years and will continue to increase unless Member States work together to improve cybersecurity.[188] The threats exist from nearly every vantage point and those threats are increasing dramatically every year.[189] In 2011, a Norton study concluded that, "threats to cyberspace have increased dramatically in the past year afflicting 431 million adult victims globally -- or 14 adults victims every second, one million cybercrime victims every day."[190] Cyber threats are able to exist because it is

[178] "Special Event On Cybersecurity," ECOSOC, http://www.un.org/en/ecosoc/cybersecurity/summary.pdf. (accessed July 14, 2016).

[179] Allison Bender, "Cybersecurity information sharing is here to stay," IAPP. https://iapp.org/news/a/cybersecurity-information-sharing-is-here-to-stay/ (accessed November 2, 2016).

[180] Ibid.

[181] Ibid.

[182] "Cyber-security Information Sharing Partnership (CiSP)," National Cyber Security Centre, https://www.ncsc.gov.uk/cisp. (accessed November 1, 2016).

[183] Ibid.

[184] Ibid.

[185] Frances Robinson, "EU Develops New Cybersecurity Rules." *Wall Street Journal* (Winter 2013), http://www.wsj.com/articles/SB1000142412788732445904578284102192561208 (accessed September 7, 2016).

[186] "Services and Solutions Offered – GRC," IMPACT Alliance, http://www.impact-alliance.org/countries/grc-intro.html (accessed September 8, 2016).

[187] Ibid.

[188] "At first-ever conference, UN takes aim at cyber-threats against nuclear safety," The United Nations, http://www.un.org/apps/news/story.asp?NewsID=51018#.V5jd17AUXcs (accessed July 9, 2016).

[189] "Cybersecurity: A global issue demanding a global approach," ECOSOC, http://www.un.org/en/development/desa/news/ecosoc/cybersecurity-demands-global-approach.html (accessed July 9, 2016).

[190] Ibid.

extremely difficult to control cyberspace. Several factors influence these difficulties. These factors can include an absence of understanding international rules, an absence of central authority, and an exploitation of loopholes.[191]

In addition, one of the more appealing attributes for cybercriminals is the idea of anonymity of their identities.[192] The endless possibilities within cyberspace create problems in identifying the perpetrator, but there is also an increasing risk of a false flag attack.[193] False flag attacks are "attacks by a state, group, or individual under an assumed identity."[194] These factors including anonymity allow cyber threats to continue. When addressing these cyber threats, some Member States have increased monitoring of their cyber networks.[195] Nonetheless, many Member States attempt to prevent a cyber threat from becoming a cyberattack or an escalation into cyber warfare.

Even with the use of ICTs increase, cyber threats and cyberattacks have the potential of increasing as well. Several international, regional, and national treaties and legislation are in place that seeks to improve cybersecurity, but there is work that still needs to be done. Member States should be aware that some Member States are lacking critical resources to improve cybersecurity in the areas of information sharing, ICT infrastructure, and expertise. Cybersecurity is not a national or regional issue; cybersecurity is an international issue as it has the potential of affecting nearly everyone globally.

Committee Directive

CSTD Member States should be prepared to discuss ways to effectively confront cybersecurity threats, while implementing solutions to enhance cybersecurity for all. There should be an understanding that no Member State is spared from a cyber threat or cyber-attack. What are ways Member States can incorporate the private sector and other international organizations? In addition, developing Member States often lack the finances and resources to implement cybersecurity measures, what are ways Member States assist in funding? What are measures Member States can undergo regarding information sharing? How can governments work together to increase global partnerships?

[191] "The UN Takes a Big Step Forward on Cybersecurity," Arms Control Association, https://www.armscontrol.org/act/2013_09/The-UN-Takes-a-Big-Step-Forward-on-Cybersecurity (accessed September 7, 2016).

[192] Ibid.

[193] Ibid.

[194] Ibid.

[195] "The use of the internet for terrorist purposes," United Nations Office on Drugs and Crime, https://www.unodc.org/documents/frontpage/Use_of_Internet_for_Terrorist_Purposes.pdf (accessed September 5, 2016).

Technical Appendix Guide

I: Smart Cities for Urban Sustainability

Falconer, Gordon, and Shane Mitchell. "Smart City Framework: A Systematic Process for Enabling Smart + Connected Communities." (n.d). http://www.cisco.com/c/dam/en_us/about/ac79/docs/ps/motm/Smart-City-Framework.pdf

Smart Cities, also known as Smart+Connected Communities, are incredibly complex and interconnected system. Many departments rely on one another requiring collaboration between organizations that do not always have the same priorities. Falconer and Mitchell suggest a framework for successfully building a smarter community. Within this framework priorities are determined as well as who oversees which components. They also layout the possible outcomes and benefits to their idea.

Ferro, E., Caroleo, B., Leo, M., Osello, M., & Pautasso, E. (n.d.). The Role of ICT in Smart City Government. Retrieved from http://www.enricoferro.com/paper/CEDEM13.pdf

The authors of this paper address fundamental changes that cities will experience when it come to governance. It also discusses the role of information and communication technologies in government and the value it creates.

Green, H. (n.d.). Smart Cities: How do we Build the Cities of Tomorrow: Hugh Green at TEDxEmory [Video file]. Retrieved from https://www.youtube.com/watch?v=YGOVEvm7dm0

In this TEDx Talks video, Hugh Green addresses the reason smart city projects are needed as well as providing a quick overview of what a smart city is. Green uses both conceptual projects as well as current integrations in city planning to make his points. He also advocates for a more connected and engaged world and discusses the benefits for its citizens.

“United Smart Cities: Smart urban solutions for transition and developing countries,” United Nations Economic Commission for Europe, http://www.unece.org/fileadmin/DAM/hlm/projects/SMART_CITIES/USC_general_presentation.pdf

This presentation by the United Nations Economic Commission for Europe briefly outlines the metrics that determine a smart city. It also provides a brief overview of the phases of urbanization for transitioning and developing Member States. Finally, it lists a few objectives and outcomes of smart city development.

II: Improving Cyber Security through Global Partnership

Gupta, Arvind, and Cherian, Samuel. "A Comprehensive Approach to Internet Governance and Cybersecurity." *Strategic Analysis* 38, no. 4 (2014): 588-594. http://dx.doi.org/10.1080/09700161.2014.918702

Cybersecurity is a pressing issue that involves many complex solutions. Gupta and Samuel argue that to combat cybersecurity, there must be a foundation in place. The foundation is internet governance. Gupta and Samuel note that most of the issues involving cybersecurity relate back to internet governance. Throughout the years, numerous processes and mechanisms have been created that focuses on internet governance. However, these processes and mechanisms only create more problems as it adds complexity to the issue.

Wegener, Henning. "Harnessing the perils in cyberspace: who is in charge?" *Disarmament Forum*, vol. 3, pp. 45-52. 2007, http://scholar.googleusercontent.com/scholar?q=cache:9tnD8mYvYQcJ:scholar.google.com/+CSTD+cyber
security&hl=en&as_sdt=0,44

The advancement in technology has brought several benefits to our society. However, along with their benefits there are also major risks. These risks often have detrimental effects internationally. Wegener notes although we are living in a world of modernization and advanced technologies, we are also living in “a world risk society.” We take pride in our advancement of technology as well as our technological achievements, these achievements and advancements should bring us not only pride but also security and protection. With the rise of cybersecurity issues, the world has become an extremely dangerous place.

Wenger, Andreas, Victor Mauer, and Myriam Dunn Cavelty. "CIIP HANDBOOK 2008/2009." http://s3.amazonaws.com/academia.edu.documents/15552942/CIIP-HB-08-09.pdf?AWSAccessKeyId=AKIAJ56TQJRTWSMTNPEA&Expires=1478208814&Signature=vkkJepdGA8jFigjL%2F1fOlkifmWw%3D&response-content-disposition=inline%3B%20filename%3DInternational_CIIP_Handbook_2008_2009_-.pdf

The protection of infrastructure is critical in combatting cybersecurity. The authors’ attempt to emphasis the importance of implementing a critical infrastructure protection (CIP) as well as a critical information infrastructure protection (CIIP). CIP focuses more on physical protection whereas CIIP focuses more on cyber protection. What separates the two is more information, CIIP is considered as the essential part of CIP. In order to implement both CIIP and CIP it must first start with the national governmental efforts.

Etzioni, Amitai. "Cybersecurity in the private sector." Issues in Science and Technology 28, no. 1 (2011): 58-62. http://static1.squarespace.com/static/53b2efd7e4b0018990a073c4/t/53c3ef81e4b055c49fb87546/1405349761140/etzioni.pdf

To fully combat cyber security, both the public and private sectors must work together. Although governments are aware of the importance of cyber protection, protecting the private sector is equally important. Traditionally protecting the private has drawn less attention, but governments rely heavily on the private sector for their infrastructure. In addition, the private sector also produces some of the hard/software that is used for governmental computers.